

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF HAWAII

In the Matter of the Application of)
MAUI ELECTRIC COMPANY, LIMITED)
Regarding Integrated Resource)
Planning.)
_____)

DOCKET NO. 04-0077

DECISION AND ORDER

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MAUI ELECTRIC COMPANY, LIMITED)
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_____)

Docket No. 04-0077

DECISION AND ORDER

By this Decision and Order, the commission approves MAUI ELECTRIC COMPANY, LTD.'s ("MECO")¹ third integrated resource plan ("IRP-3") and program implementation schedule ("Action Plan"). In so doing, the commission approves the "Stipulation Regarding Hearing and Commission Approval" ("Stipulation"), jointly filed on September 21, 2007, by MECO and the DIVISION OF CONSUMER ADVOCACY, DEPARTMENT OF COMMERCE AND CONSUMER AFFAIRS ("Consumer Advocate")² (collectively, "Parties"), except with respect to the deadline for MECO to file its fourth integrated resource plan ("IRP-4").

¹MECO is a Hawaii corporation and a public utility as defined by Hawaii Revised Statutes ("HRS") § 269-1. MECO was initially organized under the laws of the Territory of Hawaii on or about April 28, 1921. MECO is engaged in the production, purchase, transmission, distribution, and sale of electricity on the island of Maui; the production, transmission, distribution, and sale of electricity on the island of Molokai, and the production, transmission, distribution, and sale of electricity on the island of Lanai.

²The Consumer Advocate is an ex officio party to this docket pursuant to HRS § 269-51, and Hawaii Administrative Rules ("HAR") § 6-61-62(a).

The commission rejects the Parties' agreement that MECO submit its IRP-4 by December 31, 2010. The deadline for MECO's IRP-4 shall be April 30, 2010, unless ordered otherwise by the commission.

I.

Background

A.

IRP Framework

By Decision and Order No. 11523, filed on March 12, 1992, as amended by Decision and Order No. 11630, filed on May 22, 1992, in Docket No. 6617, the commission established a Framework for Integrated Resource Planning ("IRP Framework"), and required MECO, the other electric utilities in Hawaii, and Gasco, Inc. to develop IRPs in accordance with the IRP Framework.

According to the IRP Framework, the "goal of integrated resource planning is the identification of the resources or the mix of resources for meeting near and long term consumer energy needs in an efficient and reliable manner at the lowest reasonable cost."³ The IRP Framework further states that "[t]he ultimate objective of a utility's [IRP] is meeting the energy needs of the utility's customers over the ensuing 20 years."⁴ "The utility may specify any other utility-specific objective that it seeks to achieve through its [IRP].

³IRP Framework, Section II.A, at 3.

⁴IRP Framework, Section IV.B.1, at 20.

For example, given the parameter of the State goal of less dependence on imported oil, the utility may set as an objective the achievement of lowering[,] to a specified level[,] the use of imported oil."⁵

The governing principles of integrated resource planning are:

1. The development of integrated resource plans is the responsibility of each utility.
2. Integrated resource plans shall comport with state and county environmental, health, and safety laws and formally adopted state and county plans.
3. Integrated resource plans shall be developed upon consideration and analyses of the costs, effectiveness, and benefits of all appropriate, available, and feasible supply-side and demand-side options.
4. Integrated resource plans shall give consideration to the plans' impacts upon the utility's consumers, the environment, culture, community lifestyles, the State's economy, and society.
5. Integrated resource plans shall take into consideration the utility's financial integrity, size and physical capability.
6. Integrated resource planning shall be an open public process. Opportunities shall be provided for participation by the public and governmental agencies in the development and in commission review of integrated resource plans.
7. The utility is entitled to recover all appropriate and reasonable integrated resource planning and implementation costs. In addition, existing disincentives should be removed and, as appropriate, incentives should be established to encourage and reward aggressive utility pursuit of demand-side management programs.

⁵IRP Framework, Section IV.B.1, at 20. The commission may specify other objectives for the utility, but must include those objectives in the order opening the docket to commence the planning cycle. IRP Framework, Section IV.B.3, at 20.

Incentive mechanisms should be structured so that investments in suitable and effective demand-side management programs are at least as attractive to the utility as investments in supply-side options.

IRP Framework, Section II.B, at 3-4.

The commission's responsibility in integrated resource planning, as articulated in the IRP Framework, "is to determine whether the utility's plan represents a reasonable course for meeting the energy needs of the utility's customers and is in the public interest and consistent with the goals and objectives of integrated resource planning."⁶ "Specifically, the commission will review the utility's integrated resource plan, its program implementation schedule, and its evaluations, and generally monitor the utility's implementation of its plan. Upon review, the commission may approve, reject, approve in part and reject in part, or require modifications of the utility's [IRP] and program implementation schedule."⁷ "To the extent possible, the commission will hear the utility's application for approval of its [IRP] within six months of the plan's filing, and the commission will render its decision shortly thereafter."⁸

⁶IRP Framework, Section II.D.1, at 5.

⁷IRP Framework, Section II.D.2, at 5.

⁸IRP Framework, Section II.D.3, at 5.

B.

MECO's Prior Integrated Resource Plans

By Order No. 11525, filed on March 13, 1992, in Docket No. 7258, the commission opened MECO's first IRP ("IRP-1") planning docket. In the IRP Framework, the deadline for MECO's IRP-1 was set as November 1, 1993. The deadline was subsequently extended to December 15, 1993 by Order No. 12785, filed on October 28, 1993, in Docket No. 6617.

MECO filed its IRP-1 and program implementation schedule on December 15, 1993. An evidentiary hearing was held on September 19 and 20, 1994. Following the filing of opening and reply briefs, the commission issued Decision and Order No. 14707, on May 29, 1996, in Docket No. 7258, approving IRP-1, and setting the deadline for the filing of MECO's second IRP ("IRP-2") as June 1, 1998. By Order No. 14865, filed on August 8, 1996, in Docket No. 7258, the deadline to file IRP-2 was extended to September 1, 1999.

By Order No. 16777, filed on January 7, 1999, the commission opened Docket No. 99-0004 to examine MECO's IRP-2. By Order No. 17861, filed on July 27, 2000, the September 1, 1999 deadline to file MECO IRP-2 was extended to May 31, 2000.

On May 31, 2000, MECO filed its IRP-2 and accompanying Action Plan. The parties engaged in negotiations to resolve certain issues, and ultimately filed a "Stipulation Regarding Hearing and Commission Approval," on February 27, 2004.

On April 7, 2004, the commission issued Order No. 20884, approving MECO's IRP-2 and "Stipulation Regarding Hearing and Commission Approval," and closed Docket No. 99-0004. The deadline for IRP-3 was set as October 31, 2006.

C.

MECO's IRP-3

1.

Initiation of the Docket

By Order No. 20953, filed on April 30, 2004 ("Order No. 20953"), the commission opened this docket to commence MECO's third IRP cycle and to examine MECO's IRP-3 to be submitted to the commission no later than October 31, 2006.⁹ On October 17, 2006, via letter, MECO requested an extension of time from October 31, 2006 until April 30, 2007, in which to file its IRP-3. On October 23, 2006, the commission approved MECO's request for an extension of time until April 30, 2007, to file its IRP-3.

2.

Public Utility Regulatory Policies Act of 1978

On August 16, 2006, the commission requested that the Parties submit statements of whether the commission should adopt, modify, or decline to adopt the requirements

⁹See Order No. 20953, at 5.

governing fuel diversity and fossil fuel generation efficiency, sections 111(d)(12), 111(d)(13) and 112(b)(3)(A) of the Public Utility Regulatory Policies Act of 1978 ("PURPA"), as amended by the Energy Policy Act of 2005.¹⁰ On October 31, 2006, MECO requested an extension of time until December 29, 2006, to file its statement, which the commission granted on November 20, 2006. On December 29, 2006, MECO filed a letter responding to the commission's inquiries regarding fuel diversity and fossil fuel generation efficiency.¹¹ MECO's position is that the commission should decline to adopt, in whole or in part, the two federal requirements.¹²

3.

Filing of IRP-3

On April 30, 2007, MECO submitted its IRP-3.¹³ Included were descriptions of MECO's planning process and methods, its planning assumptions and forecasts, its objectives for the plan, the results of its analysis and its Advisory Group process, its Preferred Plans for Maui, Molokai, and Lanai, and

¹⁰Commission Letter to the Parties, dated August 16, 2007.

¹¹MECO Letter to the commission, dated December 29, 2006.

¹²See MECO Letter to the commission, dated December 29, 2006, at 2.

¹³MECO's Transmittal letter; and MECO's Integrated Resource Plan, 2007 - 2026, Volumes 1 - 3, filed on April 30, 2007.

its five-year Action Plan for all divisions. Also included were MECO's three Sustainability Strategies for the three islands.¹⁴

Notice of the filing of MECO's IRP-3 was published in newspapers of general circulation on May 1, 2007 (Maui News) and May 2, 2007 (Honolulu Advertiser), pursuant to Section III.E.3 of the IRP Framework.¹⁵

4.

Prehearing Order

On May 22, 2007, the commission issued Prehearing Order No. 23453 ("Prehearing Order No. 23453"), setting forth the issues, procedures, and schedule for this proceeding. The following deadlines were established: (1) June 15, 2007 for MECO to file its direct testimonies and exhibits; (2) August 15, 2007 for the Consumer Advocate and any persons subsequently named as intervenors to file their direct testimonies and exhibits; and (3) September 14, 2007 for MECO to file its rebuttal testimonies and exhibits.

¹⁴"The sustainability strategy recognizes MECO's efforts to continually factor into its long range planning process new proposals, initiatives and emerging technologies as they present themselves following the initial resource screening and integration analysis of IRP. As this is a vision for the future, no approvals are being sought for the sustainability strategy." MECO IRP-3, at 9-30.

¹⁵See MECO Letter to the commission, dated May 22, 2007.

Consistent with the prehearing orders issued in other IRP dockets,¹⁶ the commission identified the following issues for resolution in this docket:

1. Whether MECO's proposed integrated resource plan and program implementation schedule complies with the commission's IRP Framework. Included in this issue are the following sub-issues:
 - A. Whether MECO's proposed integrated resource plan represents a reasonable course for meeting the energy needs of its customers.
 - B. Whether MECO's proposed integrated resource plan is in the public interest and consistent with the goals and objectives of integrated resource planning.
 - C. Whether MECO's proposed integrated resource plan identifies the resources or mix of resources for meeting near and long-term consumer energy needs in an efficient and reliable manner at the lowest reasonable cost.
 - D. Whether MECO's proposed integrated resource plan comports with state and county environmental, health, and safety laws and formally adopted state and county plans.
 - E. Whether MECO's proposed integrated resource plan considers and analyzes the cost effectiveness and benefits of all appropriate, available, and feasible supply-side and demand-side options.
 - F. Whether MECO's proposed integrated resource plan considers the plan's impacts upon the utility's customers, the environment, culture, community lifestyles, the State of Hawaii's economy, and society.
 - G. Whether MECO's proposed integrated resource plan takes into consideration the utility's financial integrity, size, and physical capability.

¹⁶See In re Hawaiian Elec. Co., Inc., Docket No. 95-0347, Stipulated Prehearing Order No. 16596, filed on October 8, 1998 (HECO IRP-2); and In re Hawaiian Elec. Co., Inc., Docket No. 7257, Prehearing Order No. 12610, filed on September 17, 1993 (HECO IRP-1).

- H. Whether MECO's proposed integrated resource planning process provided an opportunity for participation by the public and governmental agencies in the development of its integrated resource plan.
 - I. Whether MECO's proposed integrated resource plan provides for the recovery of all appropriate and reasonable integrated resource planning and implementation costs.
 - J. Whether MECO's findings and recommendations regarding the identification, quantification, and utilization of externalities are reasonable for comparisons between resource plans within the context of integrated resource planning.
2. Whether the commission should adopt the fuel diversity and fossil fuel generation efficiency standards set forth in Sections 111(d)(12), 111(d)(13), and 112(b)(3)(A) of the Public Utility Regulatory Policies Act of 1978 [], as amended by the Energy Policy Act of 2005.

See Prehearing Order No. 23453, at 4-6. Prehearing Order No. 23453 also set the evidentiary hearing for the week of October 1, 2007.¹⁷

5.

Motion to Intervene

On June 15, 2007, Life of the Land ("LOL") filed a Motion to Intervene in this docket. On June 22, 2007, MECO filed its Memorandum in Opposition to LOL's Motion to Intervene. By Order No. 23564, filed on July 27, 2007, in this docket, LOL's Motion to Intervene was dismissed by the commission as untimely. The commission also permitted all persons or entities

¹⁷See Prehearing Order No. 23453, at 6-7.

interested in providing written comment to the commission on MECO's IRP-3 by September 4, 2007; and any response by the Parties to be filed by September 18, 2007.

On August 3, 2007, LOL filed a Motion for Reconsideration. On August 16, 2007, MECO filed a Request for Leave to File a Reply to LOL's Motion for Reconsideration. By Order No. 23672, filed on September 19, 2007, the commission denied LOL's Motion for Reconsideration.

6.

Discovery, Testimonies and Prehearing Conference

On June 15, 2007, MECO filed its Direct Testimonies and Exhibits in support of its IRP-3 Plan. MECO submitted written testimonies from ten witnesses: Edward L. Reinhardt, President, MECO; Joanne A. Ide, Supervisor, IRP/Customer Efficiency Programs Division, Customer Service Department, MECO; Sharon M. Suzuki, Manager, Customer Service Department, MECO; Michael P. Ribao, Manager, Power Supply Department, MECO; Arthur Seki, Director, Technology, MECO; Scott W.H. Seu, P.E., Manager, Energy Projects Department, MECO; Ross H. Sakuda, P.E., Director, Generation Planning Division, System Planning Department, MECO; Marc M. Matsuura, P.E., Director, Transmission Planning Division, System Planning Department, MECO; Barry M. Nakamoto, Director, Generation Bidding Division, System Planning Department, MECO; and Gary A. Hashiro, Director, IRP Division, MECO.

On June 20, 2007, a public meeting was held at the Kahului Community Center, in Kahului, Maui, to discuss the IRP-3. On June 26, 2007, the Consumer Advocate's First Submission of Information Requests was served on MECO. On July 18, 2007, MECO responded to the Consumer Advocate's First Submission of Information Requests. On August 14, 2007, the Consumer Advocate submitted a letter requesting an extension of time to August 31, 2007 to file its Written Direct Testimony. On August 29, 2007, the Consumer Advocate filed a Statement of Position in Lieu of Written Direct Testimony ("Consumer Advocate's SOP"). Among other things, the Consumer Advocate agreed with MECO's position that the commission should decline to adopt the PURPA regulations for matters governing fuel diversity and fossil fuel generation efficiency.¹⁸ Specifically, the Consumer Advocate recommended:

1. The [c]ommission should expeditiously approve MECO's IRP-3 and find that the amounts (i.e., nominal megawatts) and types of resources (e.g., firm capacity, renewable) to be pursued in the Action Plan are reasonable. This will provide MECO with sufficient time to design and implement a competitive bidding process for the procurement of the resources needed in 2011, consistent with [Decision and Order No.] 22588[,], filed in Docket No. 03-0372.
2. The [c]ommission should direct [MECO] to perform the following as part of the process of developing its next IRP (i.e., IRP-4): (1) perform a systematic assessment of the needs of its system (see discussion in [sic], and (2) identify the resultant specific needs and objectives (i.e., in addition to any general objectives, such as described in IRP-3 Chapter 2) that should be met through its IRP.

¹⁸See Consumer Advocate's SOP, at 96-97.

3. The Consumer Advocate recommends that MECO be directed to: (1) use a current forecast (i.e., a 2007 forecast) to perform the first annual update of IRP-3 that is to be filed in 2008; and (2) continue to update its sales and peak load forecast for [the] purpose of developing IRP-4.
4. [MECO] should be required to update its class load study for the development of IRP-4 to ensure that the load characteristics of each customer class are truly reflective of the electricity consumption patterns of that class. This becomes especially important when one considers the change in technology and society's increasing dependence on electronic technology.
5. The [c]ommission should direct MECO to: (1) complete any necessary due diligence review of the Hawaiian Commercial and Sugar Company ("HC&S") facility; (2) pursue a cost-effective extension to the contract, if one can be achieved; and (3) report to the [c]ommission on the status of the negotiation effort, on or before December 31, 2008.
6. The [c]ommission should direct [MECO] to address whether economic testing is warranted to evaluate the continued operation of its existing generating units for purposes of developing MECO's next IRP (i.e., IRP-4).
7. The [c]ommission should direct MECO to provide a copy of the Distributed Generation ("DG") study that was to be completed in July 2007, and reflect any adjustments deemed necessary to the forecasted contribution from DG resources in the first annual update of IRP-3 to be done in 2008.
8. The [c]ommission should direct MECO to re-evaluate the cost-effectiveness of [Demand-Side Management ("DSM")] measures using up-to-date avoided costs and submit the results of that analysis to the [c]ommission and Consumer Advocate, including any corresponding recommendations for amendments to its portfolio of DSM programs by December 31, 2008.
9. As part of a compliance filing in this Docket, the [c]ommission should direct MECO to submit: (a) the program-by-program capacity savings contributions that make up the annual totals presented in CA-IR-5 (including both energy efficiency and load control programs), and (b) a corresponding set of projected energy

(i.e., MWh [megawatt hours]) savings. [MECO] should then identify energy efficiency goals in keepings [sic] with the requirements of D&O 23258 (Section III.A). . . . A parallel set of filings for Molokai and Lanai also should be made by [MECO].

10. [MECO] should be directed to include, with IRP-4, a description of the method by which its preferred resource plan is selected such that there is more transparency of the selection process []. In addition, MECO should be required to develop a more explicit view of the potential costs of carbon emissions.
11. [MECO] should be directed to expeditiously address the concerns that must be resolved so that the proposals rooted in the Sustainable Strategy can be fully incorporated in future MECO IRPs.
12. The [c]ommission should include several findings related to the Competitive Bidding process, as addressed herein.

Consumer Advocate's SOP, at 7-10 (internal citations omitted).

On September 4, 2007, pursuant to Order No. 23564, filed on July 27, 2007, LOL filed its comments to IRP-3. On September 7, 2007, the commission sent a letter to the Parties establishing September 14, 2007 as the deadline for the filing of any settlement agreement between the Parties. On September 13, 2007, MECO submitted a letter requesting an extension of the deadline to file a settlement agreement until September 21, 2007 and to allow MECO to file a supplement to the settlement by September 24, 2007 in lieu of its rebuttal testimony on September 14, 2007. On September 14, 2007, the commission issued a Notice of Evidentiary Hearing to be held on October 1-5, 2007. On September 18, 2007, the commission approved, via letter, MECO's request for extension of time to file a settlement agreement between the Parties until

September 21, 2007. On September 18, 2007, MECO filed a letter responding to LOL's September 4, 2007 comments. On September 21, 2007, MECO filed a Supplement to its IRP-3 Sustainability Strategy in lieu of its Reply Brief. On September 21, 2007, the Parties filed their Stipulation, which among other things, waived any right to an evidentiary hearing. On September 26, 2007, the commission issued a letter to the Parties informing them that the October 1, 2007 evidentiary hearing will be removed from calendar.¹⁹

7.

Parties' Stipulation

On September 21, 2007, the Parties filed their Stipulation, by which they agreed to dispose of this proceeding in toto, without an evidentiary hearing, and instead, desired to proceed with the development of MECO's IRP-4. Specifically, they agree:

1. MECO and the Consumer Advocate do not request additional procedural steps or an evidentiary hearing in this proceeding;
2. MECO and the Consumer Advocate agree that MECO's Maui, Molokai and Lanai Division IRP-3 Plans and Action Plan (1) sufficiently meet MECO's responsibilities under Section II.C. of the IRP Framework, (2) identify the mix of resources for meeting near and long term consumer energy needs in an efficient and reliable manner at the lowest reasonable cost, and (3) should be approved by the [c]ommission;

¹⁹On December 12, 2007, MECO filed with the commission the Maui Distributed Generation Assessment study which was referenced in the Consumer Advocate's SOP, recommendation number 7. Certain confidential information was not included but would be submitted upon issuance of a protective order.

3. Pursuant to Section III.D.3 of the IRP Framework, MECO will submit an initial evaluation report of its IRP-3 Plan and Action Plan no later than December 31, 2008; and a second evaluation report no later than December 31, 2009;
4. In response to the Consumer Advocate's recommendations included in its SOP, at pages 97-100, MECO agrees to the following provisions which are acceptable to the Consumer Advocate:
 - (a) with respect to the Consumer Advocate's recommendation number 2, for IRP-4 MECO will perform a systematic assessment of the needs of its system and identify the resultant needs and objectives that should be met through IRP;
 - (b) with respect to the Consumer Advocate's recommendation number 3, MECO will use its then current short term sales and peak forecast in its IRP-3 evaluation reports, and will continue to update its sales and peak forecasts during the course of the IRP-4 process (MECO generally updates its [five]-year short term sales and peak forecast in the July timeframe, and undertakes a 20-year long term sales and peak forecast 12-15 months prior to a major IRP review);
 - (c) with respect to the Consumer Advocate's recommendation number 4, MECO conducted a class load study in 2005 and this class load study will be used in developing future sales and peak forecasts and DSM program design in the IRP process. MECO filed, on September 19, 2007, its 2005 class load study in response to CA-IR-268 in the MECO 2007 test year rate case, Docket No. 2006-0387. MECO commits to performing a class load study every five years, and will utilize the most current class load study in future cycles of IRP[footnote omitted];
 - (d) with respect to the Consumer Advocate's recommendation number 5, on July 25, 2007, MECO filed with the [c]ommission an agreement reached with HC&S wherein neither party will give written notice of termination resulting in the termination of the purchase power agreement prior to the end of the day on

December 31, 2014 and MECO will incorporate the impacts of this agreement in the development of its evaluation reports for IRP-3, and its IRP-4 Plan;

- (e) with respect to the Consumer Advocate's recommendation number 6, for IRP-4 MECO will evaluate the economics of the retirement of its existing aging generating units;
- (f) with respect to the Consumer Advocate's recommendation number 7, MECO plans to finalize its distributed generation study by early October 2007 and will file the study with [the c]ommission, and a copy will be provided to the Consumer Advocate and will incorporate any adjustments deemed necessary in the evaluation reports of IRP-3 and the development of the IRP-4 Plan;²⁰
- (g) with respect to the Consumer Advocate's recommendation number 8, MECO will assess the cost-effectiveness of its DSM programs using its latest avoided costs in conjunction with the filing of its Annual Program Accomplishments and Surcharge Report, to be filed in the April 2008 timeframe, and also will assess the cost-effectiveness of its DSM programs in its IRP-3 evaluation reports. DSM program modifications, if warranted, will be addressed in conjunction with the filing of MECO's Annual Program Modification and Evaluation ("M&E") Report, to be filed in the November 2008 timeframe, or via a letter request to the [c]ommission if a program modification is proposed to be implemented subsequent to the filing of a M&E Report. DSM program modifications also will be addressed in MECO's IRP-3 evaluation reports;
- (h) with respect to the Consumer Advocate's recommendation number 9, on July 11, 2007, MECO filed for [c]ommission review and approval its proposed 2007 and 2008 program-by-program cumulative energy efficiency MWh and MW [megawatt] goals, and these goals are consistent with the impacts identified in Chapter 6 of MECO IRP-3 Plan. For the energy efficiency and load management DSM program impacts for 2009-2026 identified in MECO's response to CA-IR-5, MECO will

²⁰On December 12, 2007, MECO submitted its Maui Distributed Generation Assessment study.

provide a Maui Division program-by-program breakdown in its December 31, 2008 IRP-3 evaluation report [footnote omitted];

- (i) with respect to the Consumer Advocate's recommendation number 10, for IRP-4 MECO commits to work with its Advisory Group to improve the manner in which the Company implements the IRP planning process as set forth in the IRP Framework, including an effort to better characterize and document the factors that are taken into consideration in the selection of the preferred plan;
- (j) with respect to the Consumer Advocate's recommendation number 11, MECO agrees to incorporate the Sustainable Energy actions into the development of IRP-4, MECO will continue to work with its Advisory Group on the Sustainability Strategy, and progress reports will be included as an agenda item for future Advisory Group meetings, and MECO will also report on its Sustainability Strategy efforts in its IRP-3 evaluation reports;
- (k) with respect to the Consumer Advocate's recommendation number 12, Exhibit A to this Stipulation provides MECO's response to the Consumer Advocate's comments on the scopes of the two RFPs [(Request for Proposals)], which includes the "technical justification for these constraints" and timing of the acquisition for the second 20 MW firm capacity resource. The Consumer Advocate finds reasonable the explanation of the "technical justification for these constraints" and timing of the acquisition for the second 20 MW firm capacity resource provided in Exhibit A and is agreeable to having the proposed RFPs for the nominal 20 MW firm capacity resources for 2011 and 2013, and the nominal 10 MW renewable energy resource for the 2011 timeframe be issued with the operational attributes identified in MECO's IRP-3. The [P]arties further agree that, as provided for in the Framework for Competitive Bidding, there will be an opportunity for further review of and comment on the proposed RFPs (including the scope of the RFP and operational attributes) by the Consumer Advocate and interested [P]arties as part of the competitive bidding process (Framework for Competitive Bidding, ¶IV.B.6);

5. Pursuant to Section III.B.2 of the IRP Framework, MECO will submit a revised (i.e., 4th) IRP Plan and Action Plan no later than December 31, 2010, unless the [c]ommission sets or approves a different date for such submission. In order to streamline the process to develop MECO's IRP-4 Plan and Action Plan, MECO will use its current IRP-3 Plan and Action Plan as the base reference plans to commence the 4th IRP cycle, and the information to be provided in its December 31, 2008 and December 31, 2009 evaluation reports will also be considered in developing IRP-4. MECO's planned course of action to conduct its IRP-4 process is provided in Exhibit C [attached to Stipulation];
6. MECO and the Consumer Advocate agree that the issue of Climate Change requires attention throughout the IRP-4 process. MECO will utilize the analyses and findings, to the extent applicable to its service territory, currently under development in the ongoing MECO IRP-4, Docket No. 2007-0084, with respect to climate change and global warming, and will perform a scenario analysis (or analyses) to analyze potential future requirements and potential utility costs arising out of measures that may be adopted to address climate changes/global warming. The Advisory Group also will have the opportunity to provide input to MECO regarding the climate changes/global warming alternative scenario analysis (or analyses), and any IRP-4 alternative resource plan that may be developed to address climate change/global warming issues;
7. In order to support competitive bidding for new generation and pursuant to Section II.D.3 of the IRP Framework, MECO and the Consumer Advocate respectfully request the [c]ommission review and approve MECO's IRP-3 on an expedited basis; and
8. The [P]arties submit that this [S]tipulation, subject to [c]ommission approval, will allow for the disposition of this proceeding.

Stipulation, at 11 to 17.

II.

Discussion

A.

IRP Process

"To maximize public participation in each utility's integrated resource planning process, opportunities for such participation shall be provided through Advisory Groups to the utility, public hearings, and interventions in formal proceedings before the commission."²¹

With respect to Advisory Groups, the utility is required to organize representatives of public and private entities to advise the utility in development of its IRP.²² The public and private entities should represent interests that are affected by the utility's IRP and can provide significant perspective or useful expertise in the development of the plan.²³ These entities include state and county agencies and environmental, cultural, business, and community interest groups.²⁴

As for public hearings, the utility is encouraged under the IRP Framework to conduct public hearings or provide public forums at various, discrete phases of the planning process

²¹IRP Framework, Section III.E, at 13.

²²IRP Framework, Section III.E.1.a, at 13.

²³IRP Framework, Section III.E.1.b, at 13.

²⁴IRP Framework, Section III.E.1.b, at 13.

to secure input of those members of the public who are not represented by entities participating in the Advisory Groups.²⁵

Upon the filing of the IRP plan, the utility is required to publish in a newspaper of general circulation statewide, a notice informing the general public that the utility has filed its proposed IRP.²⁶ To encourage public awareness of the filings of the IRP Plan, a copy of the plan and supporting analysis must be made available for public review at the commission's office, at the office of the commission's representative in the county serviced by the utility, and for MECO, a public library on each of the islands of Molokai and Lanai.²⁷ The availability of the documents at the aforementioned locations should be included in the utility's published notice.

With respect to MECO's IRP-3 process, it began with public and Advisory Group input into the development of objectives for the Preferred Plan through a number of informational meetings on the islands of Maui, Molokai, and Lanai. As part of the development of objectives, the detailed measures to be used to assess the attainment of the objectives were also determined. Subsequently, the primary data required for the analysis was developed, including the sales and peak forecasts, and DSM and supply-side resource characterizations. The supply-side resource characterizations were based on

²⁵IRP Framework, Section III.E.2.a, at 14.

²⁶IRP Framework, Section III.E.3.a, at 14.

²⁷IRP Framework, Section III.E.3.b, at 14.

Unit Information Forms ("UIFs") that provide descriptions of specific generation units in the analysis. The UIFs provide cost information and qualitative technical and engineering characterizations as well as qualitative and quantitative environmental characterizations. Also included in the analysis were combined heat and power ("CHP") and DG resource assessments. All of the data were then used in integration analysis; the initial step of which was the development of plan concepts which were then used to define finalist plans to be analyzed as the possible Preferred Plan. The plans were analyzed using attribute analysis, rates and bills analysis and sensitivity and scenario analysis. Finally, the Preferred Plan was determined based on the integration analysis, as well as input from MECO's Advisory Group and the public at public information meetings held on the islands of Maui, Molokai, and Lanai.²⁸

MECO's IRP-3 planning cycle began on April 30, 2004 with the initiation of this docket.²⁹ MECO formed an Advisory Group composed of representatives from government agencies, the business community and environmental and cultural interest groups, a "balanced cross-section of the community, and having a manageable size of 20 to 25 members."³⁰ The Advisory Group met sixteen times throughout the IRP process.³¹

²⁸See MECO T-10, at 4-5.

²⁹See Order No. 20953.

³⁰MECO IRP-3, at 3-7.

³¹See MECO IRP-3, at 3-7.

In addition, two sets of community meetings were scheduled during the process to respond to questions and invite comments.³² To allow the public to follow the IRP process, MECO set up an internet website and included information on the Advisory Group meeting schedules and meeting materials.³³

The Advisory Group assisted MECO in developing its objectives,³⁴ including (in no particular order) protecting the environment, energy security and sustainable future, economical electricity, maintain power quality and reliability, consider potential negative societal and cultural impacts, increase plan flexibility, and maintain utility financial integrity and competitiveness.³⁵

The STRATEGIST Corporate Strategic Planning System "was used to evaluate DSM and supply-side options, generate resource plans, determine the timing of generating unit additions, calculate costs of generation and DSM programs, and to quantify other plan attributes."³⁶

To select the IRP, MECO "in accordance with the IRP Framework, gave consideration to all finalist plans' impacts to the utility's customers, the environment, culture,

³²See MECO IRP-3, at 3-9 to -11.

³³See MECO T-10, at 5.

³⁴See MECO IRP-3, at 2-1 to -3.

³⁵See MECO IRP-3, at 2-1 to -17.

³⁶MECO IRP-3, at 3-11.

community lifestyles, the state's economy, and society. MECO also took into consideration the utility's financial integrity, size, and physical capability."³⁷

Having reviewed the docket record, it appears that MECO satisfied the IRP Framework requirements for public participation in the IRP process, and the level of public participation in MECO's IRP-3 process was consistent with the IRP Framework.

B.

Preferred Plan

Under the IRP Framework, the utility is required to submit its IRP as follows:

- a. The utility shall include in its [IRP] a full and detailed description of (1) the needs identified; (2) the forecasts made; (3) the assumptions underlying the forecasts; (4) the objectives to be attained by the plan; (5) the measures by which achievement of the objectives is to be assessed; (6) the resource options or mix of options included in the plan; (7) the assumptions and the basis of the assumptions underlying the plan; (8) the risks and uncertainties associated with the plan; (9) the revenue requirements on a present value basis and on an annual basis; (10) the expected impact of the plan on demand; (11) the expected achievement of objectives; (12) the potential impact of the plan on rates, consumer bills, and consumer energy use; (13) the plan's external costs and benefits; and (14) the relative sensitivity of the plan to changes in assumptions and other conditions. The items enumerated should, where appropriate, be described for the plan as a whole and for each of the resources or mix of resources included in the plan.

³⁷MECO IRP-3, at 9-1.

- b. The utility shall file with the [IRP] a full and detailed description of the analysis or analyses upon which the plan is based. The utility shall fully describe, among other things, (1) the data (and the source of the data) upon which needs were identified and forecasts made; (2) the methodologies used in forecasting; (3) the various objectives and measures of assessing attainment of objectives that were considered, but rejected, and the reasons for rejecting any objective or measure; (4) the resource options that were identified, but screened out and not considered and the reasons for the rejection of any resource; (5) the assumptions and the basis of the assumptions, the risks and uncertainties, the costs, effectiveness, and benefits (including external costs and benefits), and the impacts on demand, rates, consumer bills, and consumer energy uses associated with each resource option or mix of options that was considered; (6) the comparisons and the cost, effectiveness, and benefit tradeoffs and optimization made of the options and mixes of options; (7) the models used in the comparisons, tradeoffs, and optimization; (8) the criteria used in any rankings of options and mixes of options; and (9) the sensitivity analyses conducted for the options and mixes of options.
- c. The utility shall also file with the [IRP] a description of all alternate plans that the utility developed, the ranking it accorded the various plans, the criteria used in such ranking, and a full and detailed explanation of the analysis upon which it decided its preferred [IRP].

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IRP Framework, Section III.D.1, at 9-10.

MECO's Preferred Plan represents the plan, which in MECO's view, best optimizes the mix of supply-side and demand-side resource options in a fashion that achieves a level of effectiveness or a level of benefits specified in the objectives. The Preferred Plan is the plan selected from all other alternative plans, each of which represent optimization

from a different perspective, whether it be costs to the ratepayer (economic electricity), fuel diversification (energy security and plan flexibility), or greenhouse gas emissions (protection of the environment).³⁸

MECO selected the Renewable Energy Finalist Plan as its draft preferred integrated resource plan.³⁹ The draft Preferred Plan's demand-side features include:

- Four existing energy efficiency DSM programs, implemented over the 20-year planning period, 2007-2026. The programs include: Residential Efficient Water Heating (REWH), Commercial & Industrial Energy Efficiency (CIEE), Commercial & Industrial New Construction (CINC), and Commercial & Industrial Custom Rebate (CICR) programs.
- The Residential Direct Load Control (RDLC) and Commercial & Industrial Direct Load Control (CIDLC) programs beginning in 2008.

. . . .

MECO IRP-3, at 9-17. Significantly, in its Action Plan, MECO states that it does not plan to file program applications and implement the three new energy efficiency DSM programs proposed in the Preferred Plan (the Residential ENERGY STAR® Qualified New Homes (RESNH), the Residential ENERGY STAR® Qualified Products and Efficient Lighting (RESPL), and the Residential Low Income Energy Efficiency (RLI)).⁴⁰

³⁸MECO IRP-3, at ES-2-3.

³⁹See MECO IRP-3, at 9-14 to -20.

⁴⁰MECO IRP-3, at 12-4 and ES-17.

With regard to supply-side features, MECO's Preferred Plan proposes:

- Photovoltaic distributed resources (i.e., Customer-sited 100kW Fixed Photovoltaic systems in 2008, 2009, 2011, 2013, 2015, 2017, 2019, 2021, 2023, and 2025)
- Install one 1 MW DG unit in 2009 and two 1 MW DG units in 2010[footnote omitted]
- Acquire a 10.5 MW wind resource in 2011
- Install a 21.2 MW (net) simple-cycle combustion turbine unit at Waena Generating Station (Waena 1) in 2011
- Install four 1 MW DG units in 2012
- Install a 21.2 MW (net) simple-cycle combustion turbine unit at Waena Generating Station (Waena 2) in 2013
- Install one 1 MW DG unit in 2017
- Acquire a 25 MW Biomass unit in 2018
- Acquire a 7.1 MW Waste-to-Energy unit in 2023
- Install an 18.2 MW conversion steam turbine generator unit at Waena Generating Station (Waena 3) in 2024 that will allow Waena 1 and Waena 2 to operate in dual-train combined cycle operation
- Install two 1 MW DGs in 2026

MECO IRP Plan, at 9-18 and -19. MECO notes:

Several months after the MECO IRP-3 Preferred Plan was determined, MECO developed a short-term peak forecast covering the years 2007 to 2011. The forecast predicted lower annual peaks when compared to the forecast that was used to determine the IRP-3 Preferred Plan. In addition, the two 1 MW diesel engine generators at the Hana Substation are scheduled to be operated as dispatchable distributed generation units following communication and control upgrades

in 2007. Therefore, the Hana units are considered firm capacity and their capacity is included in the total reserve rating of the system capability. . . . As a result, the DG units scheduled for installation in 2009 and 2010 in the MECO IRP-3 Preferred Plan are no longer required for load service capability shortfall.

See MECO IRP Plan, at 9-18 n 21.

MECO states that it proposes to meet the island of Molokai's near- and long-term energy needs for the 20-year planning period from 2007-2026 by:⁴¹

- Continuing to offer four existing energy efficiency DSM service programs on Molokai;⁴²
- Installing Palaau Unit 10, a diesel engine generator, in 2014; and
- Converting GT-1, a combustion turbine, to stand-by status at the end of 2012.

MECO states that it proposes to meet the island of Lanai's near- and long-term energy needs for the 20-year planning period from 2007-2026 by:⁴³

- Continuing to offer four existing energy efficiency DSM service programs on Lanai;⁴⁴
- Installing the Four Seasons Resort Lanai at Manele Bay [CHP] system (884 kilowatts) in 2008; and
- Installing Miki Basin Unit LL-9, a 2.2 MW diesel engine generator, in 2017.

⁴¹See MECO T-1, at 4-5.

⁴²See MECO T-3.

⁴³See MECO T-1, at 5.

⁴⁴See MECO T-3.

According to MECO, the Preferred Plan complies with the commission's IRP Framework; it represents a reasonable course for meeting the energy needs of its customers; it is in the public interest and consistent with the goals and objectives of integrated resource planning; it identifies the resources or mix of resources for meeting near and long-term consumer energy needs in an efficient and reliable manner at the lowest reasonable cost; it comports with state and county environmental, health, and safety laws and formally adopted state and county plans; it considers and analyzes the cost effectiveness and benefits of all appropriate, available, and feasible supply-side and demand-side options; it considers the plan's impacts upon the utility's consumers, the environment, culture, community lifestyles, the State of Hawaii's economy, and society; it takes into consideration the utility's financial integrity, size, and physical capability; it provided an opportunity for participation by the public and governmental agencies in the development of its integrated resource plan; and its findings and recommendations regarding the identification, quantification, and utilization of externalities are reasonable for comparisons between resource plans within the context of integrated resource planning.⁴⁵

⁴⁵MECO T-10, at 7-11.

MECO believes that this plan:

Presents a mixture of renewable and traditional fossil fuel resources. However, the quantity of fossil fuel resources in the Renewable Energy Finalist Plan is less than the Least Cost Plan. As a result, the Renewable Energy Finalist Plan provides a greater diversity in fuel types and reduces the consumption of fossil fuel in comparison to the Least Cost Plan. This plan also utilizes the indigenous and renewable fuel (waste-to-energy and biomass) that can be converted into energy, thereby reducing both the dependence on foreign fuel markets and the effect of fluctuating fuel oil prices. Increased use of renewable energy also supports the county and state energy objectives. However, the Renewable Energy Plan yields a higher customer total resource cost by approximately \$78 million dollars more than the Least Cost Plan. This impacts the typical residential customer (600 kWh [kilowatt hours] per month) by increasing the monthly electricity rate by approximately \$6.16 for a 20-year planning period over the Least Cost Plan. Further, as was shown in the high fuel oil price sensitivity analysis, the difference in plan costs decrease over the 20-year planning period by approximately \$7 million dollars. MECO concluded that this renewable energy plan best satisfied the non-cost, resource diversity, and special considerations in meeting Maui's long-term energy needs with respect to cost considerations.

MECO IRP-3, at 9-15. MECO asserts that the "[a]nalysis of objectives and measures show[s] that the draft [P]referred [P]lan strikes a balance between all seven of the objectives measured, and . . . sought a reasonable equilibrium between competing objectives."⁴⁶ To support its statement, MECO submits the following example:

⁴⁶MECO IRP-3, at 9-16.

[T]he draft [P]referred [P]lan is the most expensive and produces more emissions than the two other finalist plans. This is due to waste-to-energy (WTE) and biomass resources being included in the draft preferred plan. However, the WTE and biomass resources are offset by lower fossil fuel use. Further, revenue requirements and rate impact over the first ten years of the planning period for the draft preferred plan are the same as the PV-WTE finalist plan. Over the 20-year planning period, rates rise approximately 0.5 cents per kWh for the draft preferred plan over the PV-WTE finalist plan and 1 cent per kWh over the Least Cost finalist plan.

MECO IRP-3, at 9-16.

1.

DSM Programs

Subsequent to the integration analysis, the commission issued Decision and Order No. 23258, filed on February 13, 2007 in Docket No. 05-0069 ("Energy Efficiency Docket"), in which the commission ordered that [MECO's, Hawaiian Electric Company, Inc.'s, and Hawaii Electric Light Company, Inc.'s (collectively referred to as the "HECO Companies")] energy efficiency DSM programs would transition from the HECO Companies to the non-utility market structure (i.e., third party administrator), by January 2009, unless otherwise ordered by the commission. The HECO Companies' load management programs, however, are excluded from the third-party administrator's area of responsibility.

In the Action Plan submitted with IRP-3, MECO indicates that it does not intend to file applications to implement the three new residential energy efficiency programs:

At this time, MECO does not plan to file program applications and implement the new residential energy efficiency programs in its entirety (Residential ENERGY STAR® Qualified New Homes Program, Residential ENERGY STAR® Qualified Products and Efficient Lighting Program, Residential Low Income Energy Efficiency Program)[. However, MECO will consider requesting approval in its filing to request guidance to implement certain elements of the programs such as offering incentives for compact fluorescent lamps on an interim basis, similar to what was approved for HECO in Docket No. 05-0069.

MECO IRP-3 at Chapter 12, Action Plan, at 12-4 and ES-17.

The Consumer Advocate appears to believe that the programs will be implemented. The Consumer Advocate's SOP states:

The demand-side features include implementing four existing energy efficiency programs (the Residential Efficient Water Heater program, the Commercial and Industrial Energy Efficiency program, the Commercial and Industrial New Construction program and the Commercial and Industrial Custom Rebate program (IRP-3, at 9-17). Demand-side features also include three new proposed energy efficiency DSM programs and two load management programs (the Residential Energy Star Qualified New Homes program, the Residential Energy Star Qualified Products and Efficient Lighting program, the Residential Low Income Energy Efficiency program, the Residential Direct Load Control program, and the Commercial and Industrial Direct Load Control program) (IRP-3 at 9-17).

Consumer Advocate's SOP, at 49-50.

The issue is not clearly addressed in the Parties' Stipulation. After careful consideration, the commission accepts MECO's decision to not file applications to implement the three new proposed DSM programs (the Residential ENERGY STAR® Qualified New Homes Program, Residential ENERGY STAR® Qualified Products and Efficient Lighting Program, and Residential Low Income Energy Efficiency Program) that were included in the MECO IRP-3 Preferred Plan.

While the commission is very concerned that progress in implementation of energy efficiency DSM programs in the State not be hindered in any way by the transition to a non-utility market structure, it is cognizant of the additional work that would be involved in implementing new programs. Accordingly, after much consideration and a careful weighing of the available options, the commission will approve MECO's proposal to exclude the new energy efficiency DSM programs from its Preferred Plan. As noted in Decision and Order No. 23258, until the third-party administrator is in place, the HECO Companies will continue to be responsible for overseeing their existing energy efficiency programs.

2.

Approval of the IRP-3 Plan

The Parties agree that the IRP-3 Plan should be approved expeditiously. The Consumer Advocate states:

1. The [c]ommission should expeditiously approve MECO's IRP-3 and find that the amounts (i.e., nominal megawatts) and types of resources (e.g., firm capacity, renewable) to be pursued in the

Action Plan[s] are reasonable. This will provide MECO with sufficient time to design and implement a competitive bidding process for the procurement of the resources needed in 2011, consistent with [Decision and Order No.] 22588[,] filed in Docket No. 03-0372.

Consumer Advocate's SOP, at 97. Also, the Parties' Stipulation confirms:

In order to support competitive bidding for new generation and pursuant to Section II.D.3 of the IRP Framework, MECO and the Consumer Advocate respectfully request the [c]ommission review and approve MECO's IRP-3 on an expedited basis . . .

Stipulation, at 17 (paragraph 7).

The commission herein finds that with the conditions in the Parties' Stipulation, MECO's proposed IRP-3 Plan satisfies the IRP Framework in that it presents a reasonable mix of resources to satisfy the future energy demands of MECO's customers. It endeavors to ensure that future capacity concerns will be met, including peak demands, it continues existing DSM programs, and considers alternative sources of electrical generation. The commission is aware of potential negative factors identified by MECO:

. . . the Renewable Energy Plan yields a higher customer total resource cost by approximately \$78 million dollars [sic] more than the Least Cost Plan. This impacts the typical residential customer (600 kWh per month) by increasing the monthly electricity rate by approximately \$6.16 for a 20-year planning period over the Least Cost Plan. Further, as was shown in the high fuel oil price sensitivity analysis, the difference in plan costs decrease over the 20-year planning period by approximately \$7 million dollars [sic]. MECO concluded that this renewable energy plan best satisfied the non-cost, resource diversity, and special

considerations in meeting Maui's long-term energy needs with respect to cost considerations.

MECO IRP-3, at 9-15. However, despite the above, the commission finds that the overwhelming benefits of IRP-3 make it reasonable.

The Consumer Advocate made several recommendations for MECO to address, which MECO agreed to in the Parties' Stipulation. The Consumer Advocate stated:

2. The [c]ommission should direct [MECO] to perform the following as part of the process of developing its next IRP (i.e. IRP-4): (1) perform a systematic assessment of the needs of its system (see discussion in [sic], and (2) identify the resultant specific needs and objectives (i.e., in addition to any general objectives, such as described in IRP-3 Chapter 2) that should be met through its IRP.

Consumer Advocate's SOP, at 97.

In the Parties' Stipulation, MECO agrees to fully comply with the Consumer Advocate's recommendation. It states:

- (a) with respect to the Consumer Advocate's recommendation number 2, for IRP-4 MECO will perform a systematic assessment of the needs of its system and identify the resultant needs and objectives that should be met through IRP . . .

Stipulation, at 12 (paragraph 4(a)).

The Consumer Advocate also recommended:

3. The Consumer Advocate recommends that MECO be directed to: (1) use a current forecast (i.e., a 2007 forecast) to perform the first annual update of IRP-3 that is to be filed in 2008; and (2) continue to update its sales and peak load forecast for [the] purpose of developing IRP-4.

Consumer Advocate's SOP, at 97-98. Again, MECO agreed to fully comply:

- (b) with respect to the Consumer Advocate's recommendation number 3, MECO will use its

then current short term sales and peak forecast in its IRP-3 evaluation reports, and will continue to update its sales and peak forecasts during the course of the IRP-4 process (MECO generally updates its 5-year short term sales and peak forecast in the July timeframe, and undertakes a 20-year long term sales and peak forecast 12-15 months prior to a major IRP review) . . .

Stipulation, at 12 (paragraph 4(b)).

The Consumer Advocate's fourth recommendation is:

4. [MECO] should be required to update its class load study for the development of IRP-4 to ensure that the load characteristics of each customer class are truly reflective of the electricity consumption patterns of that class. This becomes especially important when one considers the change in technology and society's increasing dependence on electronic technology.

Consumer Advocate's SOP, at 98. MECO agrees:

- (c) with respect to the Consumer Advocate's recommendation number 4, MECO conducted a class load study in 2005 and this class load study will be used in developing future sales and peak forecasts and DSM program design in the IRP process. MECO filed, on September 19, 2007, its 2005 class load study in response to CA-IR-268 in the MECO 2007 test year rate case, Docket No. 2006-0387. MECO commits to performing a class load study every five years, and will utilize the most current class load study in future cycles of IRP [footnote omitted] . . .

Stipulation, at 12-13 (paragraph 4(c)). It appears that MECO's agreement is reasonable since it addresses the request for an immediate study, as well as a commitment to perform future studies every five years.

The Consumer Advocate also recommends:

5. The [c]ommission should direct MECO to:
(1) complete any necessary due diligence review of the Hawaiian Commercial and Sugar Company ("HC&S") facility; (2) pursue a cost-effective extension to the contract, if one can be achieved; and (3) report to the [c]ommission on the status of the negotiation effort, on or before December 31, 2008.

Consumer Advocate's SOP, at 98. MECO has already fully complied with the recommendation in that it obtained an agreement with HC&S which will continue their relationship until at least December 31, 2014. MECO states:

- (d) with respect to the Consumer Advocate's recommendation number 5, on July 25, 2007, MECO filed with the [c]ommission an agreement reached with HC&S wherein neither party will give written notice of termination resulting in the termination of the purchase power agreement prior to the end of the day on December 31, 2014 and MECO will incorporate the impacts of this agreement in the development of its evaluation reports for IRP-3, and its IRP-4 [P]lan . . .

Stipulation, at 13 (paragraph 4(d)).

The Consumer Advocate's sixth request is reasonable; planning for the retirement of generation units is prudent and necessary. The Consumer Advocate recommends:

6. The [c]ommission should direct [MECO] to address whether economic testing is warranted to evaluate the continued operation of its existing generating units for purposes of developing MECO's next IRP (i.e., IRP-4).

Consumer Advocate's SOP, at 98. MECO's agreement to evaluate the generation units is a reasonable response.

- (e) with respect to the Consumer Advocate's recommendation number 6, for IRP-4 MECO will evaluate the economics of the retirement of its existing aging generating units

Stipulation, at 13 (paragraph 4(e)).

The Consumer Advocate's seventh recommendation is:

- 7. The [c]ommission should direct MECO to provide a copy of the Distributed Generation [] study that was to be completed in July 2007, and reflect any adjustments deemed necessary to the forecasted contribution from DG resources in the first annual update of IRP-3 to be done in 2008.

Consumer Advocate's SOP, at 98-99.

- (f) with respect to the Consumer Advocate's recommendation number 7, MECO plans to finalize its distributed generation study by early October 2007 and will file the study with [the c]ommission, and a copy will be provided to the Consumer Advocate and will incorporate any adjustments deemed necessary in the evaluation reports of IRP-3 and the development of the IRP-4 [P]lan

Stipulation, at 13 (paragraph 4(f)). MECO has already complied with this recommendation. On December 12, 2007, MECO filed the Maui Distributed Generation Assessment study.

The Consumer Advocate's eighth recommendation is:

- 8. The [c]ommission should direct MECO to re-evaluate the cost-effectiveness of DSM measures using up-to-date avoided costs and submit the results of that analysis to the [c]ommission and Consumer Advocate, including any corresponding recommendations for amendments to its portfolio of DSM programs by December 31, 2008.

Consumer Advocate's SOP, at 99. MECO agrees to comply with the Consumer Advocate's eighth recommendation:

- (g) with respect to the Consumer Advocate's recommendation number 8, MECO will assess the cost-effectiveness of its DSM programs using its latest avoided costs in conjunction with the filing of its Annual Program Accomplishments and Surcharge Report, to be

filed in the April 2008 timeframe, and also will assess the cost-effectiveness of its DSM programs in its IRP-3 evaluation reports. DSM program modifications, if warranted, will be addressed in conjunction with the filing of MECO's Annual Program Modification and Evaluation ("M&E") Report, to be filed in the November 2008 timeframe, or via a letter request to the [c]ommission if a program modification is proposed to be implemented subsequent to the filing of an M&E Report. DSM program modifications also will be addressed in MECO's IRP-3 evaluation reports

. . . .

Stipulation, at 13-14 (paragraph 4(g)).

The Consumer Advocate recommended that MECO submit more information on its DSM programs:

9. As part of a compliance filing in this Docket, the [c]ommission should direct MECO to submit:
(a) the program-by-program capacity savings contributions that make up the annual totals presented in CA-IR-5 (including both energy efficiency and load control programs), and
(b) a corresponding set of projected energy (i.e., MWh) savings. [MECO] should then identify energy efficiency goals in keepings [sic] with the requirements of [Decision and Order No.] 23258 (Section III.A). . . . A parallel set of filings for Molokai and Lanai also should be made by [MECO].

Consumer Advocate's SOP, at 99. MECO has already submitted the requested information.

- (h) with respect to the Consumer Advocate's recommendation number 9, on July 11, 2007, MECO filed for [c]ommission review and approval its proposed 2007 and 2008 program-by-program cumulative energy efficiency MWh and MW goals, and these goals are consistent with the impacts identified in Chapter 6 of MECO IRP-3 Plan. For the energy efficiency and load management DSM program impacts for 2009-2026 identified in

MECO's response to CA-IR-5, MECO will provide a Maui Division program-by-program breakdown in its December 31, 2008 IRP-3 evaluation report [footnote omitted].. . .

Stipulation, at 14 (paragraph 4(h)).

The Consumer Advocate's tenth recommendation is:

10. [MECO] should be directed to include, with IRP-4, a description of the method by which its preferred resource plan is selected such that there is more transparency of the selection process []. In addition, MECO should be required to develop a more explicit view of the potential costs of carbon emissions.

Consumer Advocate's SOP, at 99-100. MECO expresses a commitment to comply with the recommendation:

- (i) with respect to the Consumer Advocate's recommendation number 10, for IRP-4 MECO commits to work with its Advisory Group to improve the manner in which the Company implements the IRP planning process as set forth in the IRP Framework, including an effort to better characterize and document the factors that are taken into consideration in the selection of the [P]referred [P]lan
.. . .

Stipulation, at 14-15 (paragraph 4(i)).

The Consumer Advocate's eleventh recommendation:

11. [MECO] should be directed to expeditiously address the concerns that must be resolved so that the proposals rooted in the Sustainable Strategy can be fully incorporated in future MECO IRPs.

Consumer Advocate's SOP, at 100. MECO provides specific steps which it will employ to comply with the recommendation:

- (j) with respect to the Consumer Advocate's recommendation number 11, MECO agrees to incorporate the Sustainable Energy actions into the development of IRP-4, MECO will continue to work with its Advisory Group on the Sustainability Strategy, and progress reports will be included as an agenda item

for future Advisory Group meetings, and MECO will also report on its Sustainability Strategy efforts in its IRP-3 evaluation reports . . .

Stipulation, at 15 (paragraph 4(j)).

The Consumer Advocate's twelfth recommendation is:

12. The [c]ommission should include several findings related to the Competitive Bidding process, as addressed herein.

Consumer Advocate's SOP, at 100. In response to the Consumer Advocate's recommendation, MECO references Exhibit A to the Stipulation, which includes its position on the scope of the two RFPs and other information regarding its compliance with the Framework for Competitive Bidding:

- (k) with respect to the Consumer Advocate's recommendation number 12, Exhibit A to this Stipulation provides MECO's response to the Consumer Advocate's comments on the scopes of the two RFPs, which includes the "technical justification for these constraints" and timing of the acquisition for the second 20 MW firm capacity resource. The Consumer Advocate finds reasonable the explanation of the "technical justification for these constraints" and timing of the acquisition for the second 20 MW firm capacity resource provided in Exhibit A and is agreeable to having the proposed RFPs for the nominal 20 MW firm capacity resources for 2011 and 2013, and the nominal 10 MW renewable energy resource for the 2011 timeframe be issued with the operational attributes identified in MECO's IRP-3. The [P]arties further agree that, as provided for in the Framework for Competitive Bidding, there will be an opportunity for further review of and comment on the proposed RFPs (including the scope of the RFP and operational attributes) by the Consumer Advocate and interested [P]arties as part of the competitive bidding process (Framework for Competitive Bidding, ¶IV.B.6) . . .

Stipulation, at 15-16 (paragraph 4(k)).

In addition to addressing the Consumer Advocate's recommendations, the Parties' Stipulation also includes:

5. Pursuant to Section III.B.2 of the IRP Framework, MECO will submit a revised (i.e., 4th) IRP Plan and Action Plan no later than December 31, 2010, unless the [c]ommission sets or approves a different date for such submission. In order to streamline the process to develop MECO's IRP-4 Plan and Action Plan, MECO will use its current IRP-3 Plan and Action Plan as the base reference plans to commence the 4th IRP cycle, and the information to be provided in its December 31, 2008 and December 31, 2009 evaluation reports will also be considered in developing IRP-4. MECO's planned course of action to conduct its IRP-4 process is provided in Exhibit C [attached to Stipulation] . . .

Stipulation, at 16 (paragraph 5). The commission agrees with the tentative plan for IRP-4, except that the IRP-4 deadline is amended to April 30, 2010 (instead of December 31, 2010).

The Parties have agreed that the issue of climate change is properly left to IRP-4.

6. MECO and the Consumer Advocate agree that the issue of Climate Change requires attention throughout the IRP-4 process. MECO will utilize the analyses and findings, to the extent applicable to its service territory, currently under development in the ongoing HECO IRP-4, Docket No. 2007-0084, with respect to climate change and global warming, and will perform a scenario analysis (or analyses) to analyze potential future requirements and potential utility costs arising out of measures that may be adopted to address climate changes/global warming. The Advisory Group also will have the opportunity to provide input to MECO regarding the climate changes/global warming alternative scenario analysis (or analyses), and any IRP-4 alternative resource plan that may be developed to address climate change/global warming issues . . .

Stipulation, at 16 (paragraph 6). The commission agrees HRS §§ 342B-71, and -72, the statutory requirements pertaining to the regulation of Green House Gases, climate change, and global

warming, were enacted after IRP-3 had begun and was well underway; therefore, it is reasonable to initiate such discussions in IRP-4.

C.

Action Plan

Section III.D.2 of the IRP Framework requires the filing of a utility's Action Plan:

- a. The utility shall include in the schedule by year: the program or phases of programs to be implemented in the year; the expected level of achievement of objectives; the expected size of the target group or level of penetration of any [DSM] program; the expected supply-side capacity addition; the expenditures, by cost categories and cost elements, required to be made by the utility to support implementation of each program or phase of a program.
- b. The utility shall file with its [Action Plan] a full and detailed description of the analysis upon which the schedule is based. The utility shall fully describe, among other things:
 - (1) The steps required to realize and implement the supply-side and demand-side resource programs included in the schedule.
 - (2) How the target groups were selected and how program penetration for [DSM] programs and the expected levels of effectiveness in achieving integrated resource planning objectives were derived.
 - (3) The expected annual effects of program implementation on the utility and its system, the ratepayers, the environment, public health and safety, cultural interests, the state economy, and society in general.
- c. The [Action Plan] shall also be accompanied by the utility's proposals on cost and revenue loss recovery and incentives, as appropriate.

IRP Framework, Section III.D.3, at 10-11.

The Action Plans detail specific actions needed to be taken over the five year period from 2007 to 2011 to implement the Preferred Plan.⁴⁷ MECO's Action Plan consists of the following items:

All Divisions:

1. File a request for guidance with respect to the energy efficiency goals to be established for 2007 and 2008 and implementing MECO's existing energy efficiency DSM programs. The request also seeks to clarify plans for the proposed modifications to the existing energy efficiency DSM programs, the proposed new energy efficiency DSM programs, and load control DSM programs for Maui Division
2. Evaluate using biofuels in existing and new units, with subsequent testing
3. Pursue land lease and pricing agreement between BlueEarth Biofuels, LLC and MECO
4. Pursue potential renewable energy projects
5. Facilitate development of emerging renewable energy technologies
6. Evaluate programs designed for customer-sited photovoltaics

Maui Division:

1. File applications for load control DSM programs
2. Mitigate system reliability and potential cost impacts of additional as-available energy resources
3. Investigate ancillary services benefits and feasibility of pump storage hydro generation
4. Continue to work with the County of Maui on landfill gas and waste-to-energy projects

⁴⁷MECO IRP-3, at 12-1.

5. Implement [commission] framework for competitive bidding for new generation:
 - a. Develop and issue a two-phase request for proposal for next two large blocks of firm capacity generation needed in the 2011 and 2013 time frame
 - b. Continue to pursue the installation of the first simple-cycle combustion turbine at the Waena Generation Station as the utility's parallel plan, and likely the utility's bid in the [Request For Proposal ("RFP")] for firm capacity resource
 - c. Pending the outcome of the technical assessment identified in Action Plan Item No. 4 immediately above, the detailed scope and requirements of a renewable energy RFP consistent with resource needs established in the IRP may be developed and issued for a planned resource in the 2011 timeframe
6. Mitigate potential capacity and reserve margin shortfalls
 - a. Conduct a distributed generation site survey and permitting study
 - b. Install small distributed generation units as necessary and practical to meet short-term firm capacity needs, taking into account the outcome of the distributed generation site survey and permitting study
 - c. Implement the projects necessary to convert the Hana generators from emergency to true dispatchable distributed generation units
 - d. Initiate and pursue negotiations for continuation of the Hawaiian Commercial & Sugar Company purchase power agreement
7. Monitor CHP activities

Molokai Division:

1. Conduct wind assessment and system impact mitigation study for wind energy resources which will include review of data from previous wind farm on Molokai
2. Pursue wind energy resources based on study results

Lanai Division:

1. Conduct wind assessment and system impact mitigation study for wind energy resources
2. Pursue wind energy resource based on study results
3. Obtain approval for and install CHP at the Four Seasons Resort Lanai at Manele Bay

MECO IRP-3, at 12-1 to -3. Having reviewed MECO's Action Plan, the commission finds that it is consistent with Section III.D.2.a of the IRP Framework. MECO has provided detailed actions which it intends to take in the five year period from 2007 to 2011, in furtherance of the Preferred Plan. Therefore, the commission finds that the Action Plan represents a reasonable course for MECO's supply-side and demand-side resource programs.

D.

PURPA

Sections 111(d)(12), 111(d)(13), and 112(b)(3)(A) of PURPA, as amended by the Energy Policy Act of 2005, require the commission to commence consideration of the following matters governing fuel diversity and fossil fuel generation efficiency:⁴⁸

- (12) FUEL SOURCES - Each electric utility shall develop a plan to minimize dependence on 1 fuel source and to ensure that the electric energy it sells to

⁴⁸Section 102(a) of PURPA states:

This chapter applies to each electric utility in any calendar year, and to each proceeding relating to each electric utility in such year, if the total sales of electric energy by such utility for purposes other than resale exceeded 500 million kilowatt-hours during any calendar year beginning after December 31, 1975, and before the immediately preceding calendar year.

consumers is generated using a diverse range of fuels and technologies, including renewable technologies.

- (13) FOSSIL FUEL GENERATION EFFICIENCY - Each electric utility shall develop and implement a 10-year plan to increase the efficiency of its fossil fuel generation.

16 U.S.C. § 2621(d)(12) - (13). See also 16 U.S.C. § 2622(b)(3)(A).

By letter dated August 16, 2006, the commission requested that MECO and the Consumer Advocate provide their position, if any, on whether the commission should adopt, modify, or decline to adopt those requirements.⁴⁹ On December 29, 2006, MECO recommended that the commission should decline to adopt in whole or in part the federal requirements.⁵⁰ The Consumer Advocate states, "the Consumer Advocate concurs with MECO's position as set forth in the Company's December 29, 2006 letter to the [c]ommission on Issue 2 - - Whether the commission should adopt the fuel diversity and fossil fuel generation efficiency standards set forth in Sections 111(d)(12), 111(d)(13), and 112(b)(3)(A) of [PURPA]."⁵¹ The rationale advocated is:

The IRP process is the appropriate mechanism for determining the extent to which and timing as to how a utility will minimize its dependence on one fuel source and to ensure that the electricity energy it sells to consumers is generated using a diverse range of fuels and technologies, including

⁴⁹Commission Letter to the Parties, dated August 16, 2007.

⁵⁰MECO Letter to the commission, dated December 29, 2006, at 2.

⁵¹Consumer Advocate's SOP, at 96.

renewable technologies. The IRP process is also the appropriate mechanism for determining the actions deemed necessary to increase the efficiency of a utility's fossil fuel generation. These objectives can appropriately be set forth as a goal for the IRP and the actions for meeting the goal can be evaluated in the IRP process, consistent with the [c]ommission's IRP Framework.⁵²

Moreover, in their Stipulation, the Parties state:

In general, one size fits all federal standards are not the optimal method to achieve objectives such as energy efficiency and implementation of renewable resources. Rather, utility specific objectives that are developed and refined in periodic IRP processes are preferable. In this manner, a utility's specific circumstances (such as its specific existing generation mix and opportunities to acquire renewable resources through mechanisms such as competitive bidding) and State requirements and policies (such as standards mandated in the Renewable Portfolio Standards law, policies established in H.R.S. §226-18, and goals and objectives mandated by the [c]ommission in the IRP Framework and in proceedings such as the Energy Efficiency Docket) can be taken into consideration. MECO's IRP-3 Plan addressed in a comprehensive manner matters governing fuel diversity and fossil fuel generation efficiency.

Stipulation, at 2.

Upon review, the commission agrees with MECO and the Consumer Advocate that adoption of the two federal requirements on developing plans related to fuel diversity and fossil fuel generation efficiency is unnecessary. As pointed out by the Parties, the electric utilities are all involved in formal IRP processes where fuel diversity and fossil fuel generation efficiency are included in the planning process and in

⁵²Consumer Advocate's SOP, at 96.

the IRP plans. Accordingly, for the reasons stated in the Stipulation, the commission declines to adopt the federal requirements regarding fuel diversity and fossil fuel generation efficiency.

F.

IRP-3 Evaluation Reports

Pursuant to Section III.D.3 of the IRP Framework, MECO is required to file annual evaluation reports, which assess the continuing validity of the forecasts and assumptions upon which its IRP and Action Plan were made; and compares the anticipated plan objectives, effects, and expenditures with those actually attained, experienced or made. The IRP Framework requires:

Together with its annual evaluation, the utility shall submit a revised program implementation plan that drops the immediately preceding year from the schedule and includes a new year. The program implementation plan must always reflect a five-year time span.

IRP Framework, Section III.D.3.d, at 12. The utility may, at any time, as a result of its annual evaluation or change in conditions, revise or amend its IRP or program implementation schedule.⁵³

⁵³See IRP Framework, Section III.D.4, at 12.

In their Stipulation, MECO and the Consumer Advocate agree that MECO shall submit an initial evaluation report of its IRP-3 Plan and Action Plan no later than December 31, 2008, and a second evaluation report no later than December 31, 2009.⁵⁴ These time frames are acceptable to the commission.

G.

IRP-4

Under Section III.B.2 of the IRP Framework, each utility shall conduct a major review of its IRP every three years. Section III.B.2 states:

Each utility shall conduct a major review of its integrated resource plan every three years. In such a review, a new 20-year time horizon shall be adopted, the planning process repeated, and the utility's resource programs re-analyzed fully. The first major review, following the submission of each utility's integrated resource plan to the commission in 1993, shall commence in 1995 so as to result in the submission to the commission of a new (second) integrated resource plan and implementation schedule in 1996 as follows Thereafter, each utility shall conduct a major review, resulting in the submission to the commission of a new integrated resource plan and implementation schedule on the same day every three years.

As IRP-3 was filed on April 30, 2007, IRP-4 should be filed in 2010. In their Stipulation, MECO and the Consumer Advocate agree that MECO will submit a revised IRP Plan and Action Plan no later than December 31, 2010.⁵⁵ MECO states, "to streamline the process to develop MECO's IRP-4 Plan and Action Plan, MECO will use its

⁵⁴See Stipulation, at 11-12.

⁵⁵See Stipulation, at 16.

current IRP-3 Plan and Action Plan as the base reference plans to commence the 4th IRP cycle, and the information to be provided in its December 31, 2008 and December 31, 2009 evaluation reports will also be considered in developing IRP-4."⁵⁶

Given the number of extension requests for filing of IRP plans that the commission typically receives, the commission declines to accept the December 31, 2010 date stipulated to by the parties and will instead set a deadline of April 30, 2010, for MECO's filing of IRP-4.

With respect to the substance of IRP-4, in the Stipulation, MECO and the Consumer Advocate agreed that MECO should more fully examine the potential ramifications of climate change and global warming.⁵⁷ This plan is consistent with the relatively recent requirements of HRS §§ 342B-71, and -72, pertaining to the regulation of green house gas emissions, global warming, and climate change.

III.

Orders

THE COMMISSION ORDERS:

1. MECO's IRP-3 Plan and Action Plan, submitted on April 30, 2007; and MECO and the Consumer Advocate's "Stipulation Regarding Hearing and Commission Approval" dated September 21, 2007, are approved.

⁵⁶Stipulation, at 16.

⁵⁷See Stipulation, at 16.

2. MECO shall recover its IRP-3 planning costs through base rates.

3. Pursuant to Section III.D.3 of the IRP Framework, MECO shall file an initial evaluation report of its IRP-3 Plan and Action Plan no later than December 31, 2008, and a second evaluation report no later than December 31, 2009.

4. Pursuant to Section III.B.2 of the IRP Framework, MECO shall conduct a major review of its IRP by adopting a new 20-year planning horizon, repeating the planning process, and fully re-analyzing its resource programs. MECO shall file its IRP-4 no later than April 30, 2010.


5. MECO shall consider the implications of HRS §§ 342B-71, and -72, pertaining to the regulation of green house gas emissions, global warming, and climate change, in IRP-4; specifically, how it plans to satisfy the statutory requirements of emissions reductions.


DONE at Honolulu, Hawaii

JUL 18 2008

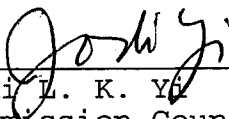
PUBLIC UTILITIES COMMISSION
OF THE STATE OF HAWAII

By: 
Carlito P. Caliboso, Chairman

By: 
John E. Cole, Commissioner

By: 
Leslie H. Kondo, Commissioner

APPROVED AS TO FORM:


Jodi L. K. Yi
Commission Counsel

04-0077.laa

CERTIFICATE OF SERVICE

The foregoing order was served on the date of filing by mail, postage prepaid, and properly addressed to the following parties:

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